

JUL 05 2006

Remarks

Claims 1 and 2 are pending in the subject application. By this amendment, claim 1 has been amended. No new matter has been added. Support for this amendment can be found, at least, at paragraph [0009]. Upon entry of this amendment, claims 1 and 2 will be before the Examiner.

The amendments to the claims have been made in an effort to lend greater clarity to the claimed subject matter and to expedite prosecution. These amendments should not be taken to indicate Applicant's agreement with, or acquiescence to, the rejections of record. Favorable consideration of the claims now presented, in view of the remarks and amendments set forth herein, is earnestly solicited.

Claims 1 and 2 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Tsau (U.S. Patent No. 6,803,306) in view of Lee *et al.* (U.S. Patent No. 5,918,135), and further in view of Huang *et al.* (U.S. Patent No. 5,874,355). Applicant respectfully traverses.

The Office Action at page 3 admits that "Tsau does not explicitly disclose depositing the TiN barrier layer directly on the surface of the metal layer, and subsequently removing some part of the TiN barrier with the insulating layer when opening the contact hole to expose the metal layer." Then, Office Action at page 3 indicates that "It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the metal/TiN stack of Lee *et al.* in the capacitor device of Tsau."

However, Lee *et al.* does not teach forming a pattern on the TiN layer and making a capacitor part and a contact hole part using the pattern, the capacitor part comprising some portion of the metal layer and the TiN layer as specified in subject claim 1. Rather, Lee *et al.* teaches, as shown in Figure 6, that the TiN layer 114 is etched and removed from the metal layer 112a, which effectively removes the TiN layer as a capacitor part. In particular, Lee *et al.* teaches, at col. 4, lines 34-39, that "[a] first photoresist pattern 117 is formed on the second insulating layer 116 to provide an etching mask . . . [t]he second insulating layer 116 is then patterned by etching exposed portions thereof thus exposing a portion of the lower capacitor electrode 112a opposite the first insulating layer 110." Further, at col. 4, lines 45-48, "[t]he first photoresist pattern 117 is then removed, and a dielectric layer 120 is formed on the second insulating layer 116 and the exposed portion of the lower capacitor electrode 112a." (Underline added).

In addition, Lee *et al.* provides the TiN layer for reducing hillocks on the metallic layer before etching the TiN layer to expose the metallic layer (see Lee *et al.* at col. 4, lines 22-29). Therefore there is no teaching or suggestion for the TiN layer to remain as part of the capacitor part below the dielectric layer of the capacitor.

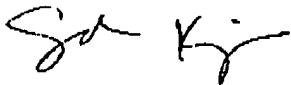
Moreover, claim 1 has been amended to further clarify that the capacitor part comprises some portion of the metal layer and the TiN layer as a lower metal layer of the capacitor. Because all elements of pending claim 1 are not suggested by Tsau, Lee *et al.*, and Huang *et al.*, alone or in combination, the references do not render claim 1 obvious. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the §103(a) rejection of claims 1 and 2.

In view of the foregoing remarks and amendments to the claims, Applicant believes that the currently pending claims are in condition for allowance, and such action is respectfully requested.

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 or 1.17 as required by this paper to Deposit Account 19-0065.

The Applicant invites the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,



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